L4: Entry 2 of 2 File: DWPI Jan 31, 1980

DERWENT-ACC-NO: 1980-B7400C
DERWENT-WEEK: 198008

TITLE: Drainage pipe internal cleaner unit - has mobile frame with hose reel, hose guide and mobile hose feeding arrangement to insert hose into pipe

PATENT-ASSIGNEE:

ASSIGNEE	CODE
HOMBURG MACH BV	HOMBN

PRIORITY-DATA: 1978NL-0011818 (December 4, 1978)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
NL 7811818 A	January 31, 1980		000	
BE 879856 A	March 3, 1980		000	
DE 2947591 A	June 26, 1980		000	
DE 2947591 C	June 19, 1987		000	
DK 7905002 A	July 7, 1980		000	
FR 2443293 A	August 8, 1980		000	
GB 2037392 A	July 9, 1980		000	
GB 2037392 B	March 9, 1983		000	
IT 1124962 B	May 14, 1986		000	
NL 174118 B	December 1, 1983		000	

INT-CL (IPC): B08B 9/06; B09B 0/00; B65H 49/18; E02B 11/00

ABSTRACTED-PUB-NO: NL 7811818A
BASIC-ABSTRACT:

The mechanism for cleaning pipes, partic. drainage pipes comprises a mobile frame carrying a reel for a hose which can be inserted into the pipe, a hose guide, and block to feed the hose into the pipe.

The guide ma consist of a tube through which the hose can be moved. The guide may be pivotable on the frame and movable by one or more cylinder actuators. The feeder may comprise friction wheels on either side of the hose, of which one can be driven, pref. by a hydraulic motor.

TITLE-TERMS: DRAIN PIPE INTERNAL CLEAN UNIT MOBILE FRAME HOSE REEL HOSE GUIDE MOBILE HOSE FEED ARRANGE INSERT HOSE PIPE

DERWENT-CLASS: P43 Q36 Q42

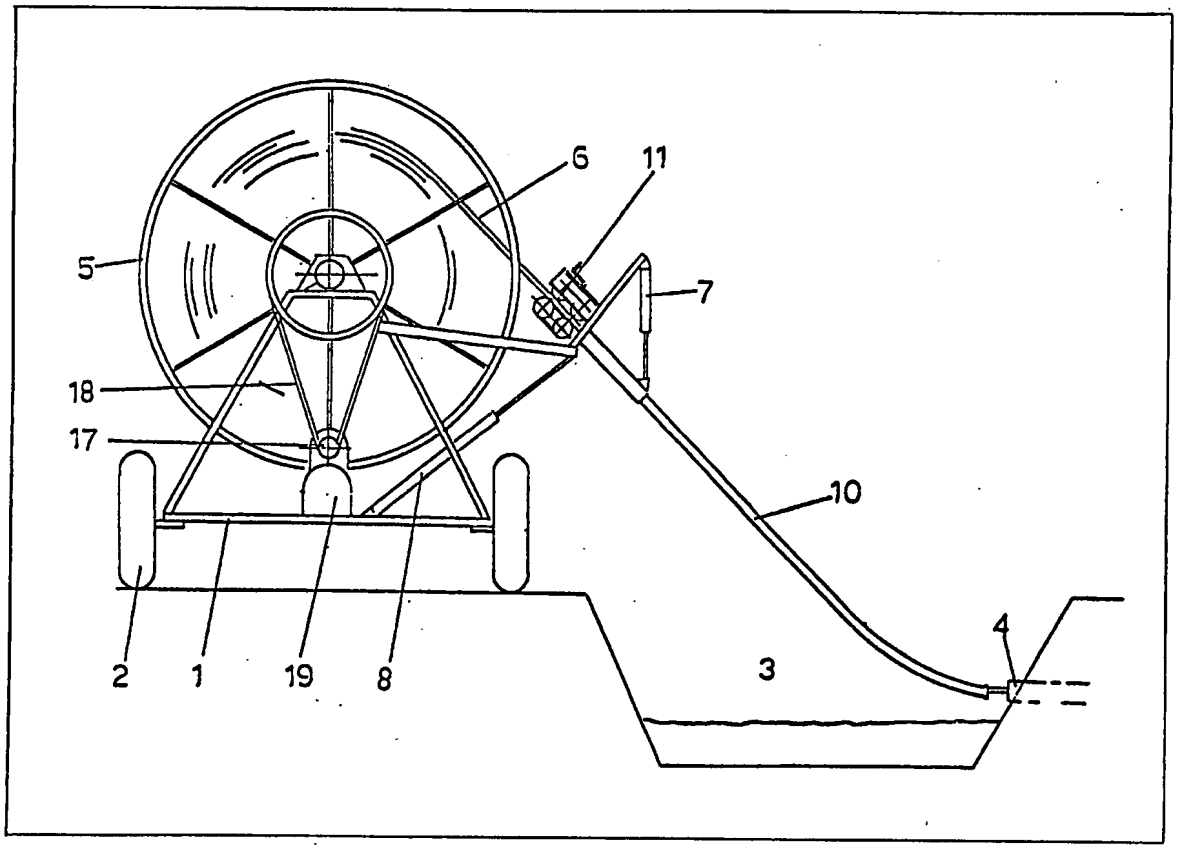
Previous Doc Next Doc Go to Doc#

(12) UK Patent Application (19) GB (11) 2 037 392 A

(21) Application No 7939675
(22) Date of filing 16 Nov 1979
(30) Priority data
(31) 7811818
(32) 4 Dec 1978
(33) Netherlands (NL)
(43) Application published 9 Jul 1980
(51) INT CL³ B08B 9/06
(52) Domestic classification F2N 2A 6G
(56) Documents cited
GB 1507959
GB 1436739
GB 1349515
GB 1307252
GB 1276591
GB 1228372
(58) Field of search E1C F2N F2P
(71) Applicants Homburg Machinehandel B.V., Postbus 5, Stiens, Holland
(72) Inventor Frits Homburg
(74) Agents Potts, Kerr & Co.

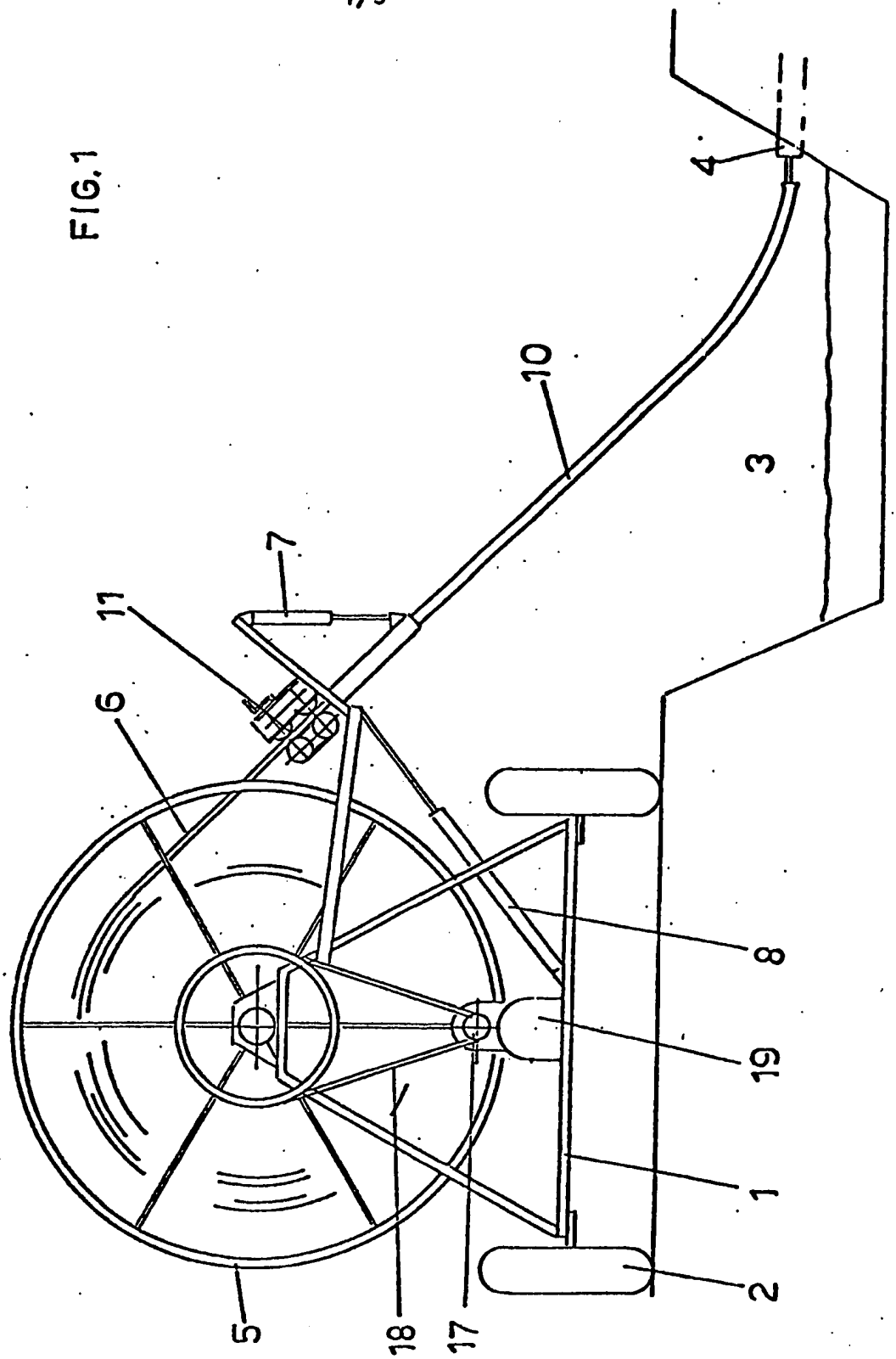
(54) **Cleaning pipes**

(57) An apparatus for flushing pipes, in particular drain-pipes 4, formed by a frame 1 on which a reel 5 is mounted for a hose 6 and being provided with guiding means 10 for introducing the hose 6 from the reel 5 into the pipe 4 to be flushed, whilst along the path of movement of the hose 6 at least one propulsion device 11 is arranged to move the hose 6.



GB 2 037 392A

FIG.1



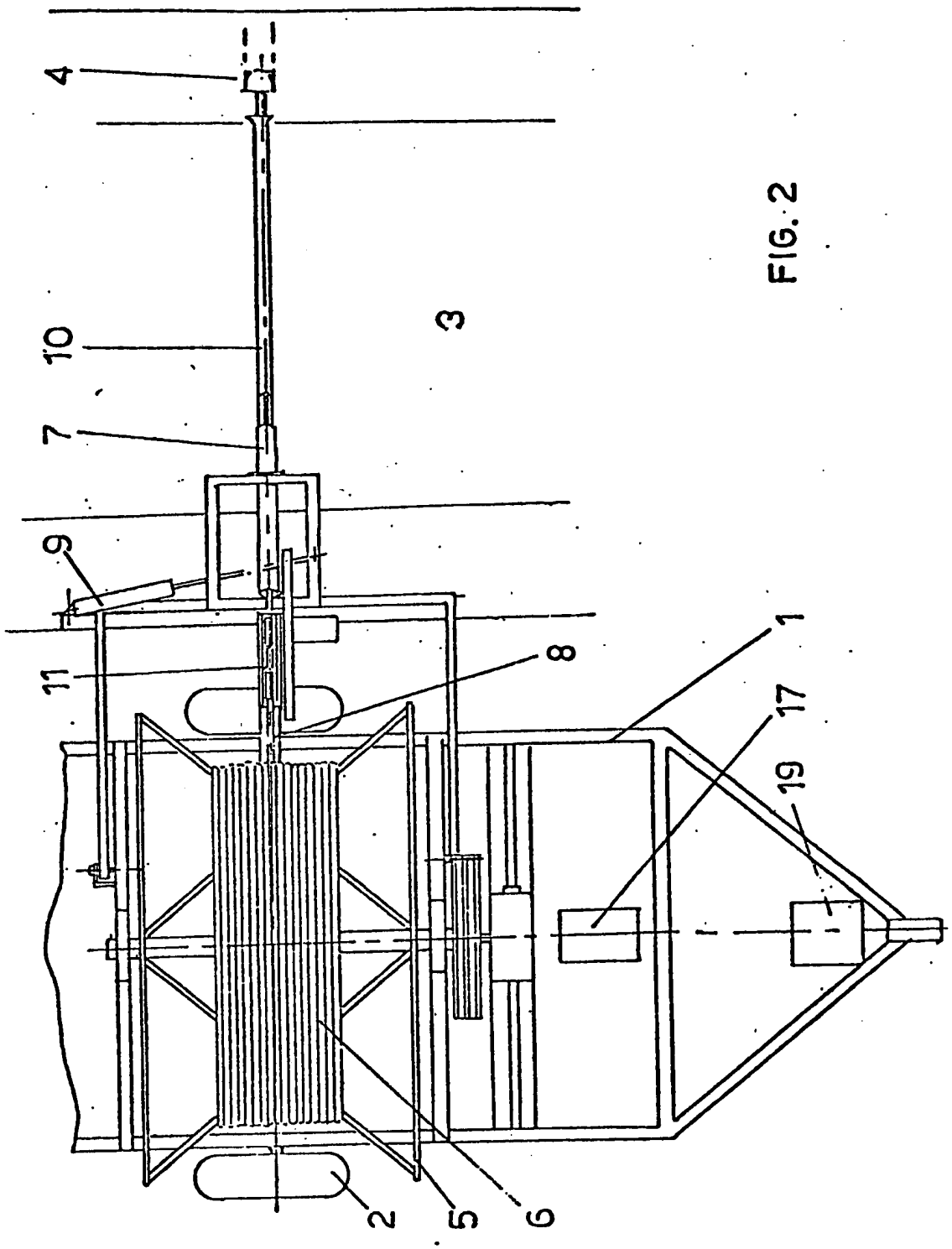


FIG. 2

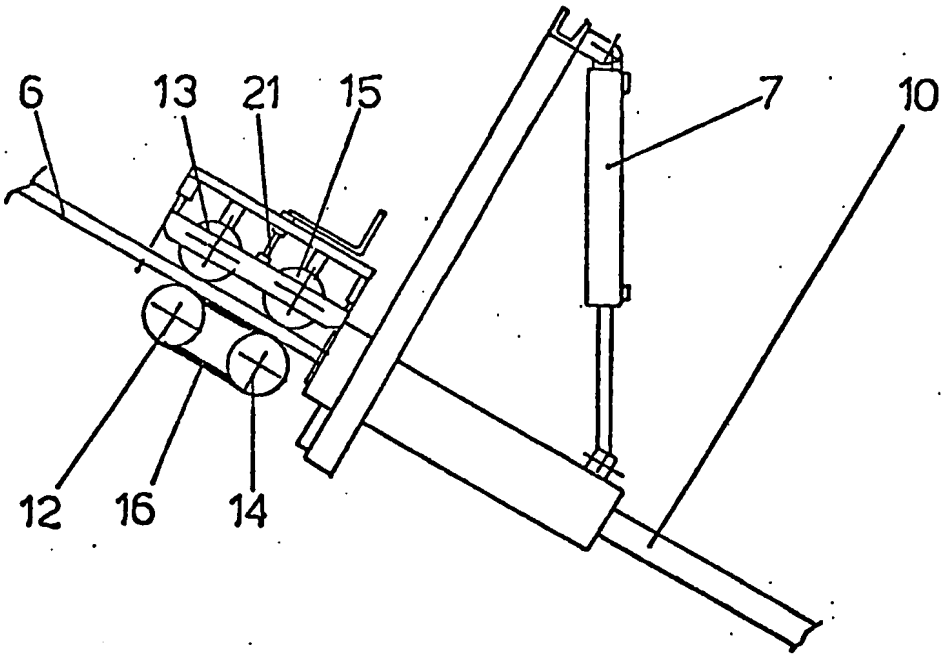


FIG. 3

SPECIFICATION

An apparatus for flushing pipes, in particular drain-pipes

The present invention provides an apparatus for flushing pipes, in particular drain-pipes.

Drain pipes, as applied into the soil to drain off the land, gradually become silted up by solid ground portions entrained to inside the pipe by the drained-off water and so, it is necessary to flush the drain-pipes from time to time to open and clean same.

According to the known method, the flushing of the drain-pipes is carried out by introducing by hand a hose with a nozzle into the drain-pipe and after which the drain-pipe is flushed whereby the sludge in the pipe is dislodged and carried off to the outside of the pipe against the direction of movement of the hose in the pipe.

To introduce the flushing hose into the drain-pipe and to move it on in the drain-pipe by hand is very tiring and laborious.

It is an object of the present invention to provide an apparatus for flushing pipes, in particular drain-pipes.

According to a feature of the invention there is provided a frame, particularly to be moved on in arrear of a tractor and on which frame a reel is mounted for a hose to be introduced into the pipes to be flushed, said frame further being provided with guiding means for the hose, whilst along the path of movement of the hose at least one propulsion device is arranged to move on the hose.

The guiding means may be variously shaped.

According to a further feature of the invention, the guiding means is formed by a guiding pipe through which the hose may be moved on from the reel and into the pipe to be flushed.

In an embodiment of the invented apparatus the guiding pipe is mounted for movement with respect to the frame and may be governed by one or more hydraulic cylinders. The outlet of the guiding pipe may be brought in front of the drain-pipe to be flushed in a very simple manner by just operating the governing valves of the hydraulic cylindres, after which the cleaning hose may be introduced from the guiding pipe into the drain-pipe.

The propulsion device for the flushing hose may be variously shaped.

According to a feature of the invention, the propulsion device is formed by at least one pair of friction wheels mounted on both sides of the path of movement of the hose and at least partly enclosing the path of movement, whilst at least one friction wheel may be driven by a motor, in particular a hydraulic motor.

In a very favourable embodiment of the invented apparatus, the propulsion device is formed by two pairs of friction wheels, spaced from each other along the path of movement of the hose, and between which at least one belt is arranged to act upon the path of movement of the hose.

In this embodiment of the invented apparatus, the cleaning hose may be propelled through the guiding pipe by both pairs of friction wheels as well as by the belt arranged in between.

After cleaning the drain-pipe the hose is to be pulled back from the drain-pipe and to be wound onto the reel.

According to the invention there is provided a motor, in particular a hydraulic motor to rotate the reel.

The driving force, in the form of the pressure fluid may be supplied by a traction in a known manner.

The invention will now be described by way of example with reference to the accompanying drawings in which

Fig. 1 is a front view of the apparatus according to the invention,

Fig. 2 is a top view of this apparatus, and

Fig. 3 is a veiw in enlarged scale of the propulsion device for the flushing hose.

As is shown in the drawing, the apparatus comprises a frame (1) which may be moved on on wheels (2) by means of a tractor (not shown) along a ditch (3) into which the drain-pipes (4) to be flushed debouch.

On the frame (1) the reel (5) for the flushing hose (6) is mounted and from which the hose may be brought by the guiding pipe (10), which is governed by means of the hydraulic cylinders (7), (8) and (9), to the outlet of the drain-pipe and into it.

Near the inlet of the guiding pipe (10) the propulsion device (11) is arranged along the path of movement of the cleaning hose.

As is shown more in particular in Fig. 3, the propulsion device consists of two pairs of friction wheels (12, 13) and (14, 15) and of which at least one friction wheel may be driven by the hydraulic motor (20).

Between the friction wheels (12) and (14) the —V— belt (16) is arranged and by which the propelling surface acting on the hose is increased.

As is further shown in Fig. 3, the distance of the friction wheels, situated on both sides of the path of movement of the hose, and thereby the gripping on the hose may be regulated by means of the screw-spindle (21).

The reel may be driven be means of the hydraulic motor (17) and the belt (18) for pulling back the hose from the flushed drain-pipe and winding in onto the reel. The hose may be supplied with the required flushing water by the pump (19).

CLAIMS

1. An apparatus for flushing pipes, in particular drain-pipes, characterized in that this apparatus is formed by a frame, more in particular to be moved on in arrear of a tractor, on which frame a reel is mounted for a hose to be introduced into the pipes to be flushed, said frame further being provided with guiding means by means of which the hose may be introduced in the pipe to be flushed, whilst

along the path of movement of the hose at least one propulsion device is arranged for moving on the hose through the pipe to be flushed.

2. An apparatus as claimed in claim 1, characterized in that the guiding means is formed by a guiding pipe through which the hose may be brought.

3. An apparatus as claimed in claim 2, characterized in that the guiding pipe is mounted for movement with respect to the frame of the apparatus and may be governed by means of one or more hydraulic cylinders.

4. An apparatus as claimed in claim 1, 2 or 3, characterized in that the propulsion device for the hose is formed by at least one pair of friction wheels arranged on both sides of the path of movement of the hose and at least partly enclosing this path of movement, whilst at least one friction wheel may be driven by a motor, in particular a hydraulic motor.

5. An apparatus as claimed in one of the preceding claims, characterized in that the propulsion device is formed by two pairs of friction wheels spaced from each other along the path of movement of the hose and between which at least one belt is arranged.

6. An appartus as claimed in one of the preceding claims, characterized in that the reel may be driven by a motor, in particular a hydraulic motor.

7. An apparatus for flushing pipes substantially as herein described with reference to the accompanying drawing.

Printed for Her Majesty's Stationery Office by the Courier Press, Leamington Spa, 1980. Published by the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.